

COMPLETE LISTING OF CLAIMS
IN ASCENDING ORDER WITH STATUS INDICATOR

Claim 1 (currently amended): In an objective zoom lens for an electronic camera, the objective zoom lens having ~~one~~ two or more movable lens groups located between object space and an image plane and an optical stop located between the two or more movable lens groups and the image plane, an improvement comprising:

an optical element located between the optical stop and the image plane on an optical axis of the zoom lens, and the optical element having a surface at a location selected along the optical axis such that the optical element will receive light rays substantially collimated and perpendicular to said surface regardless of an orientation the movement of the ~~one~~ two or more lens groups, and

a coating on said optical element surface forming an interference filter for causing a modification of the spectrum of light waves supplied to the camera in a manner for the camera to simulate a predetermined spectrum of light rays.

Claim 2 (currently amended): The objective zoom lens of claim 1, wherein said optical element surface is optically flat.

Claim 3 (currently amended): The objective zoom lens of claim 1, wherein said optical element is removable and replaceable from the objective zoom lens.

Claim 4 (currently amended): The objective zoom lens of claim 3, further including a replacement optical element having substantially the same optical characteristics and without said coating.

Claim 5 (currently amended): The objective zoom lens of claim 1, wherein said location along the optical axis is adjacent an iris of the objective zoom lens.

Claim 6 (currently amended): The objective zoom lens of claim 1, wherein the objective zoom lens includes focusing means and said location along the optical axis allows focusing of the objective zoom lens without substantially changing an angle of incidence of the light rays on said surface.

Claim 7 (currently amended): The objective zoom lens of claim 1, wherein the objective zoom lens includes zooming means and said location along the optical axis allows zooming of the objective zoom lens without substantially changing an angle of incidence of the light rays on said surface.

Claim 8 (currently amended): The objective zoom lens of claim 7, wherein the objective zoom lens includes focusing means and said location along the optical axis allows focusing of the objective zoom lens without substantially changing an angle of incidence of the light rays on said surface.

Claim 9 (currently amended): The objective zoom lens of claim 1, wherein said coating includes layers of low refractive index material and layers of high refractive index materials for producing said predetermined spectrum of light rays.

Claim 10 (currently amended): In an objective zoom lens for an electronic camera, the objective zoom lens having ~~one~~ two or more movable lens groups located between object space and an image plane and an optical stop located between the two or more movable lens groups and the image plane, an improvement comprising;

an optically flat optical element located between the optical stop and the image plane, on and perpendicular to an optical axis of the lens at a location selected along the optical axis such that the optical element will receive substantially collimated light rays substantially perpendicular to the optical element regardless of ~~an orientation~~ the movement of the ~~one~~ two or more lens groups, and

a coating on said optical element forming an interference filter for causing a modification of the spectrum of light waves supplied to the camera in a manner for the camera to simulate a predetermined spectrum of light rays.

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Claim 11 (currently amended): The objective zoom lens of claim 10, wherein said optical element is removable and replaceable from the objective zoom lens.

Claim 12 (currently amended): The objective zoom lens of claim 11, further including a replacement optical element having substantially the same optical characteristics and without said coating.

Claim 13 (currently amended): The objective zoom lens of claim 10, wherein said location along the optical axis is adjacent an iris of the objective zoom lens.

Claim 14 (currently amended): The objective zoom lens of claim 10, wherein the objective zoom lens includes focusing means and said location along the optical axis allows focusing of the objective zoom lens without substantially changing an angle of incidence of the light rays on said surface.

Claim 15 (currently amended): The objective zoom lens of claim 10, wherein the objective zoom lens includes zooming means and said location along the optical axis allows zooming of the objective zoom lens without substantially changing an angle of incidence of the light rays on said surface.

Claim 16 (currently amended): The objective zoom lens of claim 15, wherein the objective zoom lens includes focusing means and said location along the optical axis allows focusing of the objective zoom lens without substantially changing an angle of incidence of the light rays on said surface.

Claim 17 (currently amended): The objective zoom lens of claim 10, wherein said coating includes layers of low refractive index material and layers of high refractive index materials for producing said predetermined spectrum of light rays.

Claim 18 (currently amended): A method for causing an electronic camera to sense and reproduce a predetermined spectrum of light rays, comprising the steps of:

providing the camera with an objective zoom lens having one two or more movable lens groups located between object space and an image plane and an optical stop located between the two or more movable lens groups and the image plane, and having an

providing an optical element surface located between the optical stop and the image plane within the objective zoom lens at a location where the light rays are substantially collimated and perpendicular to the optical element surface regardless of an orientation the movement of the one two or more lens groups, and

providing the optical element surface with a coating forming an interference filter for modifying the spectrum of light rays to the predetermined spectrum for supplying to the camera.

Claim 19 (currently amended): The method according to claim 18, including the step of removing and replacing an the optical element having said surface with another optical element

having a surface with a different coating forming an interference filter for modifying the spectrum of light rays to a different predetermined spectrum.

Claim 20 (original): The method according to claim 18, including the step of selecting said coating for said optical element surface for modifying the spectrum of light rays to simulate the predetermined spectrum of a film emulsion of film for a film camera.

Claim 21 (currently amended): The method according to claim 18, including the step of selecting the location of the optical element surface within the objective zoom lens on the basis of the location having minimum ray incident angles at the surface.

Claim 22 (original): The method according to claim 21, wherein the maximum ray incident angle on the surface is 15°.

Claim 23 (currently amended): A method for causing an electronic camera to sense and reproduce a predetermined spectrum of light rays, comprising the steps of:

providing the camera with an objective zoom lens having one two or more movable lens groups located between object space and an image plane and an optical stop located between the two or more movable lens groups and the image plane, and having an

providing an optical element located between the optical stop and the image plane within the objective zoom lens at a location of substantially collimated light rays substantially perpendicular to the optical element regardless of an orientation the movement of the one two or more lens groups, and

providing the optical element with a coating forming an interference filter for modifying the spectrum of light rays to the predetermined spectrum for supplying to the camera.

Claim 24 (original): The method according to claim 21, wherein the optical element is optically flat.

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Claim 25 (currently amended): An objective zoom lens having one two or more movable lens groups located between object space and an image plane and an optical stop located between the two or more movable lens groups and the image plane for causing an electronic camera to sense and reproduce a predetermined spectrum of light rays, comprising:

an optical element located between the optical stop and the image plane within the objective zoom lens at a location of substantially collimated light rays substantially perpendicular to the optical element regardless of an orientation the movement of the one two or more lens groups, and

a coating on said optical element forming an interference filter for modifying the spectrum of light rays to the predetermined spectrum for supplying to the video camera.